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Commentary

Liver Transplantation in Schistosomiasis: A Surgical Approach in Endemic Regions

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DESCRIPTION

Schistosomiasis, a neglected tropical disease caused by parasitic flatworms of the genus *Schistosoma,* poses a significant global health challenge, particularly in regions with inadequate access to clean water and sanitation. While preventive measures and drug therapy play important role in controlling the spread of the disease, advanced surgical interventions have become essential in managing severe complications and transforming the lives of individuals affected by Schistosomiasis. The parasitic worms responsible for the disease have a complex life cycle, involving freshwater snails as intermediate hosts and humans as definitive hosts. Infected individuals shed parasite eggs through urine or feces into freshwater bodies, where the larvae can infect snails and continue the cycle. Chronic Schistosomiasis can lead to severe complications, primarily affecting the liver, intestines, and urinary system. Hepatosplenic Schistosomiasis, characterized by liver fibrosis and portal hypertension, is a common manifestation. Urogenital Schistosomiasis involves the urinary tract and can lead to bladder and genital lesions, often resulting in significant morbidity.

Advances in schistosomiasis surgery

Portal hypertension management: Advanced cases of hepatosplenic schistosomiasis may lead to portal hypertension, necessitating surgical interventions. Portal shunting procedures, such as splenorenal and portosystemic shunts, have been employed to alleviate portal pressure and reduce the risk of complications like variceal bleeding.

Liver transplantation: In extreme cases with end-stage liver disease due to schistosomiasis, liver transplantation has emerged as a transformative surgical option. While the availability of transplant facilities is limited in endemic regions, this approach holds promise in improving survival rates and enhancing the quality of life for affected individuals.

Bladder reconstruction: Severe cases of urogenital schistosomiasis can lead to extensive damage to the bladder and genital organs. Surgical reconstruction procedures, such as bladder augmentation and ureteric reimplantation, aim to restore normal urinary function and alleviate obstructive complications.

Genital lesion repair: Surgical interventions are employed to repair genital lesions caused by schistosomiasis, addressing issues such as vaginal stenosis and lesions affecting the reproductive organs. These procedures contribute to improving reproductive health and overall well-being.

Laparoscopic and endoscopic approaches: Minimally invasive techniques, including laparoscopy and endoscopy, are being explored for certain schistosomiasis-related complications. These approaches offer the advantage of reduced postoperative pain, shorter hospital stays, and faster recovery, particularly in cases requiring diagnostic procedures or minor interventions.

Hydrocele surgery: In areas where urogenital schistosomiasis is prevalent, hydrocele surgery is a preventive measure to address the accumulation of fluid in the scrotum. While it does not cure the underlying schistosomiasis, it provides relief from the discomfort associated with hydrocele.

In many endemic regions, access to advanced surgical infrastructure is limited. This poses a challenge in providing timely and appropriate surgical interventions for individuals with severe schistosomiasis complications, especially those requiring complex procedures like liver transplantation. The long-term success of schistosomiasis surgery relies on effective postoperative follow-up and management. However, challenges such as limited healthcare resources, infrastructure, and patient adherence to follow-up appointments the optimal postoperative care of individuals undergoing surgical interventions. Socioeconomic factors, including poverty and lack of education, contribute to the persistence of schistosomiasis. Addressing the surgical needs of affected individuals requires a holistic approach that considers the broader social determinants of health. Surgical interventions should be integrated into broader control strategies for schistosomiasis. This includes combining surgery with preventive chemotherapy, improved water and sanitation

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infrastructure, health education, and community engagement to achieve comprehensive disease control.

Surgical interventions play a transformative role in improving the quality of life for individuals suffering from severe schistosomiasis complications. Procedures addressing urogenital and hepatosplenic manifestations contribute to symptom relief and functional restoration. Surgical reconstruction procedures in cases of urogenital schistosomiasis contribute to enhanced reproductive health. By addressing genital lesions and obstructive complications, these interventions can positively impact fertility and overall reproductive well-being. Preventive surgeries, such as hydrocele surgery, help prevent complications associated with urogenital schistosomiasis. Overcoming challenges related to limited infrastructure, postoperative follow-up, and socioeconomic factors requires concerted efforts, global collaboration, and innovative approaches. As the field of schistosomiasis surgery advances, it not only alleviating the burden of complications but also contributing to the broader goal of controlling and eliminating this neglected tropical disease.